A Quantitative and Qualitative Comparison of Online Media Coverage of Men's and Women's Collegiate Sports

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ABSTRACT

Courtney Jewell Mascarella: A Quantitative and Qualitative Comparison
of Online Media Coverage of Men's and Women's Collegiate Sports
(Under the direction of Barbara Osborne)

Research into official online content devoted to women's and men's collegiate sports has found some progress towards equitable coverage. The goal of this study is to determine whether such progress towards gender equity continues or is promoted by newer online forums. To answer these questions official online sports content from twelve "Power 5" schools was examined. The results indicate that men's sports and male athletes receive moderately better coverage both in the quantity and quality of online content. In addition a trend analysis indicates that although there are some instances of apparent progress in this and past studies, no general progress towards gender equity is now evident. Future research suggested by this is to examine more schools and more sports for a longer period of time. This would allow a larger-scale trend analysis using consistent methodology.

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CHAPTER ONE

INTRODUCTION

The depiction of men's and women's sports in the mass media is a history of a strong bias against the equitable depiction of women as athletes. Such bias involves both the poorer *quantity* and *quality* of attention devoted to women's sports in the media. The prevalence and tenacity of the bias favoring men's sports has been well-established in the print and broadcast media. But with the advent of new media types enabled by the Internet, new forums have appeared which offer the promise for progress beyond the historical bias of the traditional media. The question is has this new arena of Internet-enabled media types (online news, blogs, social media) in fact provided any observable progress away from the bias in the depiction of men and women athletes?

Two dynamics could be at work in the new Internet-enabled media: *disintermediation* and *rejuvenation*. Disintermediation would be the result of the new Internet communication technologies allowing women's sports programs or individual women athletes themselves to take a more direct role in the promotion of their sports. Likewise, as a sort of rejuvenation of sports media, a new generation of media authors more skillful and familiar with the new media are speaking directly to a newer generation audience. Both the creators and audience of this new content would come with new set of tastes and expectations outside of the control of the male-centric "old" media. Add to this the fact that these skill sets and expectations have a natural renewal cycle in college athletics as students move through the system. The result could well be

that the Internet-enabled media may have already taken the lead in a rapid evolution of the depiction of women's sports, particularly on college campuses.

But has it?

Or has what may have started as a personal, "bottom-up" social media marked by disintermediation and rejuvenation been co-opted by athletic departments or entire universities as they realize the value of the new forums and move into the use and control of Internet-enabled media? This could have the effect of re-directing, diluting, or slowing what progress may have been possible in the depiction of women in sports.

STATEMENT OF PURPOSE

Could sustained, widespread progress in the equitable depiction of women in sports actually be occurring? And if so, could such progress be observed by an objective study? Internet-enabled media, particularly social media, could be difficult to study by rigorous, objective methods. The purpose of this research is to determine if any significant bias in the depiction of male and female athletes can be detected *via* a statistical analysis of the content of college athletic department sponsored web pages and social media.

RESEARCH QUESTIONS

The specific research questions to be answered are:

RQ1: From a *quantitative* perspective, are men's sports posted about more frequently than women's sports on official athletic department Instagram accounts and websites?

RQ2: From a *qualitative* perspective, does the language and content vary in men's sports posts vs. women's sports posts?

RQ3: From a comparison of what is currently observable *vs.* the record of previously published studies are there any trends evident in the relative coverage women's vs. men's sports?

ASSUMPTIONS

The focus of this study will be the official web pages and social media sponsored by collegiate athletic departments. The assumption is that such online media (1) might be less driven by purely financial considerations compared to content generated by professional sports teams, (2) must be held accountable to Title IX regulations, and (3) if generational turn-over is a factor, then colleges will be where the effect of the involvement of a newer generation will be seen first and have the greatest influence. The fundamental assumption here is that online media forums where progress in the depiction of women's sports is most likely to be observable will be within the context of collegiate athletics. Another assumption is that *quantitative* measures based on a numeric scoring rubric can adequately capture the change or differences in gender bias expressed in online media.

DELIMITATIONS

The scope of the research is limited to Power 5 college sports conferences and twelve specific teams. Analysis will be limited to content generated regarding events occurring during the 2017 to 2018 academic years. The sports programs included in the study will be Men's Basketball (MBB), Women's Basketball (WBB), Men's Soccer (MSOC), Women's Soccer (WSOC), Men's Tennis (MTEN), Women's Tennis (WTEN), Men's Cross Country (MXC), and Women's Cross Country (WXC). This is an even mixture of "male appropriate", "female appropriate", and "neutral" sports. The online media to be studied are official athletic department web sites and Instagram accounts.

LIMITATIONS

Due to the lack of programs sponsored at certain schools only eleven ACC schools, one SEC school, six B1G schools, and four PAC-12 schools qualified. Due to this uneven representation of the various conferences, no comparisons between conferences was contemplated. Although Internet-enabled media do provide unprecedented access to media information streams, there are some limitations to this approach which must be taken into account. The study is limited to publicly accessible web sites and social media. Also, the content must be part of the permanent content offered by the sponsoring organization. Material posted online for brief periods will also beyond the reach of this study (*e.g.*, Snapchat).

DEFINITION OF TERMS

Regular season: begins with the first game not in a special tournament (such as Battle 4 Atlantis) and ends with the last game before conference tournaments (or NCAA tournament if that sport does not have a conference tournament).

Power 5: The five U.S. collegiate athletic conferences are known (unofficially) as the "Power Five." The Power 5 conferences and member schools are listed below.

Table 1. Power 5 Conference

ACC	Big Ten	Big 12	Pac-12	SEC
Boston College	Illinois	Baylor	Arizona	Alabama
Clemson*	Indiana*	Iowa State	Arizona State	Arkansas
Duke	Iowa	Kansas	California	Auburn
Florida State	Maryland	Kansas State	UCLA*	Florida
Georgia Tech	Michigan	Oklahoma	Colorado	Georgia
Louisville	Michigan State*	Oklahoma State	Oregon	Kentucky*
Miami	Minnesota	TCU	Oregon State	LSU
UNC-Chapel Hill*	Nebraska	Texas	USC	Ole Miss
NC State*	Northwestern	Texas Tech	Stanford	Miss State
Pittsburgh	Ohio State	West Virginia	Utah	Missouri
Syracuse	Penn State*		Washington*	South Carolina
Virginia*	Purdue		Washington State	Tennessee
Virginia Tech	Rutgers			Texas A&M
Wake Forest*	Wisconsin*			Vanderbilt
Notre Dame		* Schools included in this study		

SIGNIFICANCE OF STUDY

This study is intended to determine whether the growing use of online media by athletic departments is providing a more equitable depiction of women in sport. These research results provide guidance to athletic departments and academic organizations utilizing online media as a communications medium to become more compliant with Title IX.

Beyond the "snapshot" of more recent practices of social media depiction of women's sports, comparing the findings of this study with historical data of the same type provides a picture of what progress (if any) has occurred. This is significant in that it helps establish whether the efforts that the various schools have put into online media initiatives has been successful with regards to overcoming gender bias and Title IX compliance. Such a finding would have been supportive of a continued effort and investment in using social media to publicize and support women's sport programs. However, as determined by this study, progress towards equitable coverage of women's and men's sports is frequently *not* evident. This finding is suggestive that athletic departments should carefully reassess the overall strategy and management of content generation for such web sites. The promise that progress towards Title IX compliance could be made visible by a new generation of content creators using a new generation of online media sadly does not seem to have been fully realized.

CHAPTER TWO

REVIEW OF LITERATURE

Introduction

Sports is more than the game. Without fans, donors, and sponsorships, the game by itself cannot survive. Creating (and maintaining) a team image for public consumption that matches the needs and expectations of fans and sponsors is critical. However, critical as team image may be for the health and growth of a team, it is readily apparent that the treatment of women's sports may never have been on par with that afforded to men's sports (Cunningham, 2003). The general impression is that women's teams (and entire sports) struggle to attract media attention, build followings, or even establish robust cultural and financial presence (Rosas, Herriges, & Orazem, 2011; Whiteside & Hardin, 2011).

A central question is that, given that such bias in media attention has been prevalent in the past, is progress now or ever possible? One conceptual framework is that media bias in the depiction of male and female athletes is purposeful and willful (Kian, Vincent, & Mondello, 2008). This would imply that media of all types could produce different outcomes if the individual, business, and larger organizational goals (outside of mere financial motivations) evolve (Allison, 2016; Deutsch, 2007). Such evolution could be rapid, particularly enabled by the power of new media. In contrast, if the bias against parity in the depiction of female athletes arises from a deep-seated psychological or cultural dynamic, the system could be much slower and harder to change (Goffman, 1977). Sports can take a leadership role and promote causes, but

society at large may resist. Also, if bias is the result of some sort of complex interaction between cause and effect between media and society, such reflexivity could create a sort of equilibrium that sustains itself and damps out the possibility of change (Goffman, 1977).

Background: "Doing Gender" in the Context of Online Sports Media

Gender-biased treatment of female athletes in media has been explored through a variety of approaches. Goffman (1977) makes the argument that individuals retain a gender-based "referencing system" their entire lives, first learned in their earliest family experiences and training in sports. As a result, sports are "scenes for the performance of genderisms by both sexes… which affirms beliefs about the differential human nature of the two sexes…" (Goffman, 1977, p. 325). Goffman argues that sport is particularly suited to be a gendered performance space as "…few jobs call on this marginal performance, this stretching of physical capacity. Yet it is just this marginal difference between the strong and the weak, the sturdy and the slight, the tall and the short, that is employed in the doctrine we [*i.e.,* society] have concerning work and sex" (Goffman, 1977, p. 322).

West & Zimmerman expanded on this idea in 1987 with the concept of "doing gender." This is a theory that most human activities (including sports) are merely forums for the vital activity of creating and renewing gender identity (West & Zimmerman, 1998). West and Zimmerman cite Goffman's idea that "organized sports are one such institutionalized framework for the expression of manliness" (West & Zimmerman, 1998, p. 137). Note that the conventional function of sports in this social framing is the expression of "manliness", not "womanliness". This asymmetry in "doing gender" casts men and women into separate socially acceptable roles: "should situations emerge in which greater size, strength, or experience is called for, boys and

men will be ever ready to display it and girls and women, to appreciate its display" (West & Zimmerman, 1998, p. 138).

Here we have the essential dichotomy of sports in this "doing gender" framework. Men perform and women are the (passive) audience. Thus in the "doing gender" framing of sports as just another performance space for such gender reaffirming performance, media (of whatever type, print, broadcast, or online) will always be drawn back to expressions of this asymmetry in gender roles. As West and Zimmerman (1998) observe for a female physician, "she is subject to evaluation in terms of normative conceptions of appropriate attitudes and activities for her sex category and under pressure to prove that she is an 'essentially' feminine being, despite appearances to the contrary" (West & Zimmerman, 1998, p. 140). Applied to women athletes, particularly in sports that are pushing the limits of what may perceived as socially acceptable for women, women may also feel the same sort of pressure to reaffirm their "essential" femininity. So they may feel obliged to cooperate with or accept biased media coverage.

In terms of the "doing gender" performance roles: "little boys appropriate the gender ideal of 'efficaciousness,' that is, being able to affect the physical and social environment through the exercise of physical strength or appropriate skills. In contrast, little girls learn to value 'appearance,' that is, managing themselves as ornamental objects" (West & Zimmerman, 1998, p.141). Translated into the context of online media, the "doing gender" argument is that this bias, men as powerful and women as beautiful, will persist no matter how new the technological forum. West and Zimmerman (1998) do offer the hope that "an understanding of how gender is produced in social situations will afford clarification of the interactional scaffolding of social structure and the social control processes that sustain it" (West & Zimmerman, 1998, p. 147). But without this understanding of the "doing gender" performance

dynamic, progress beyond a biased media representation of men and women athletes will be difficult.

Other researchers have provided variations on the psychological theories. Messner, Dunbar and Hunt (2000) maintain that the image of sports on television fulfills a powerful psychological need (particularly in young boys) to see the socially acceptable heroic figure of the male athlete consistently presented. A textual analysis of sports broadcasts found a very rigid presentation of "narrow and stereotypical messages about race, gender, and violence" that they labeled the "Televised Sports Manhood Formula" (Messner, Dunbar, & Hunt, 2000. p. 380). In this analysis of sports programming "images or discussion of women athletes is almost entirely absent in the sports programs that boys watch most" (Messner, Dunbar, & Hunt, 2000. p. 382). When women do (infrequently) appear, it is "most often in stereotypical roles as sexy, masculinity-validating props, often cheering the men on" (Messner, Dunbar, & Hunt, 2000. p. 383). In this rather bleak picture of a strong bias against equitable depictions of women in sports, Messner, *et al.* suggest that this is all done in the service of powerful psychological needs in the audience.

Likewise, End, Dietz-Uhler, Harrick and Jacquemotte (2002) suggest that sports satisfy a psychological need to identify with winners through a learned, culturally conventional way. The concept here is that the sports audience (perceived as primarily male) is looking to sports media to provide a continually renewed opportunity to "bask in reflected glory" (End, *et.al*, 2002, p. 1017). So the media reflexively provides what the perceived audience is seeking: images of male glory.

Such psychological or cultural arguments would suggest that progress in the depiction of women in sports would be difficult if not impossible. Even if one accepts this conceptual

framework, perhaps the rise of new media in the hands of a new generation of creators and consumers may yet offer the possibility of progress.

There are more recent alternative conceptual frameworks which support the possibility of progress in the depiction of women athletes in modern media. As pointed out by Cave and Miller (2015), the front offices of teams are discovering the value of new media to reach new (and younger) fans. The lasting importance of new media forums is therefore being accepted by team management and changes to the messaging could well be accepted. Three separate 2016 studies offered the idea that female athletes and teams could employ new media to achieve social affirmation, promote progressive causes, or even carve out distinct female sports spaces (Allison, 2016; Comley, 2016; Kende, van Zomeren, Ujhelyi, & Lantos, 2016). Limitations were also discussed, such as the tension between the contending profit-seeking and social-cause-promoting needs of teams that may impede the more progressive media initiatives (Allison, 2016).

Another damping effect on progress away from bias in media depiction of women athletes has been observed in a 25-year study of televised coverage of women's sports that relates to the quality of the coverage (Musto, Cooky, & Messner, 2017). The results of this study suggest that, while media depictions have become less biased, they have at the same time become much more bland and lackluster. So avoiding sexism in the media has resulted in a lower quality product for women's sports. Musto, *et al.* (2017) characterize this as going from "sizzle" to "fizzle," which is to say the promise of the advantages of unbiased depiction for women athletes arising from 25 years of social evolution has not been realized.

Studies - Print and Broadcast

An examination of a twenty-year record of published studies (1993 to 2013) finds that not much consistent progress in the equitable depiction of women in sports is evident, though some progress can be found in a surprising place. Messner, Duncan and Jensen (1993) studied gender marking in televised coverage of men's and women's basketball and tennis It was found that men are more often referred to by their last names only and women are even more frequently referred by their first names only. This was seen as "infantilization" of women; another finding that reinforced this idea is that women were occasionally referred to as "girls" but male athletes were never referred to as "boys" (Messner, *et al.*, 1993, p. 127).

In a study of print media coverage of U.S. women's Olympic Gold Medal winning teams, Jones, Murrell and Jackson (1999) identified another dimension of the bias against the equitable depiction of women athletes. Their analysis focused on the frequency with which "task relevant" *vs.* "performance-irrelevant" commentary was offered on male vs. female athletes. They found that print media coverage of female athletes playing basketball, hockey, and soccer (traditional male sports) at superior performance levels, "frequently deemphasizes task-relevant aspects of their performance and focuses instead on performance-irrelevant dimensions" (Jones, *et al.*, 1999, p. 189).

Focusing on the quantity of televised coverage of female Olympic athletes eight years later, Davis and Tuggle (2012) found that the situation had not changed very much. This study found that although female athletes' participation had increased from 34% for the U.S. Olympic team members in 1996 to 48% in 2008, the amount of television coverage of women's Olympic sports had actually decreased slightly from 47% to 46%. Furthermore, 97% of the coverage of

women's events was limited to what could be considered the socially acceptable or appropriately feminine sports (Davis & Tuggle, 2012).

Bissell and Smith (2013) studied the play-by-play commentary and videography from five U.S. women's beach volleyball matches during the 2008 Olympics. These researchers coded the televised coverage based on 14 "commentary codes" such as "Physical/Behavioral," "Dominance," "Leadership," "Personal Information," "Looks/Personality/Sexuality" with "valence codes" of "Negative," "Neutral," or "Positive." The videography was coded for what part of the court and player's bodies were emphasized and at what magnification. Their conclusion was that "viewers were presented with non-sexualized coverage of the women's beach volleyball event from the 2008 Olympic Games, which is a finding somewhat contradictory to earlier studies" (Bissell & Smith, 2013, p.19). There appears to be some progress in the media depiction of female athletes, at least for one sport during one Summer Olympics.

Studies - Online Media

A thirteen-year history (2003 to 2016) of studies of the depiction of women athletes on the Internet offers a record of mixed results. In 2003, Cunningham examined the official university web coverage of men's and women's tennis teams from five schools randomly selected from seven of the eight NCAA Division I districts. A marker for coverage bias Cunningham employed was how much information describing the head coach (name, biography, photograph) and full roster was offered for each team. The quantity measure was how much total text was devoted to each team on the web page. Cunningham found that women's teams received more coverage as measured by the length of press releases while no difference between men's and women's tennis teams was found in the amount of information provided. As Cunningham

concluded “taking a new look at this old problem has provided exciting results”(Cunningham , 2003, p. 48).

In a study that somewhat validates Musto’s “sizzle to fizzle” concept, Kian, Vincent and Mondello (2008) examined four major online media sources: two print (*The New York Times* and *USA Today*), and two strictly online (*ESPN Internet* and *CBS SportsLine*). The reporting on the 2006 men’s and women’s NCAA Division I basketball tournaments were examined over a 26-day period during which 508 articles were published. The quantity of coverage was 76% for the men’s games, 23% for the women’s and about 1% mentioned both. A textual analysis was then performed which found six dominant themes, all of which supported “dominant notions of the gender order” (*i.e.,* the predominance of men’s sports) (Kian, Vincent & Mondello, 2008, p.228). Beyond these quantity and quality biases, Kian, *et al.*, found another more subtle bias. Their idea is that although older forms of bias may have been abandoned, newer forms have appeared: “…despite many reversals [of bias] that could be construed as advancements for women in college basketball and their corresponding media coverage, some but not all of the earlier representations of masculinity have been replaced by newer representations… although media images of desirable masculinities and femininities have been somewhat reconfigured, the resulting images sustain the relations embedded in the gender order” (Kian, *et al.*, 2008, p. 238).

Kian and his colleagues returned to this question a year later in a study focused on online media sources (Kian, Mondello, & Vincent, 2009). In the context of strictly online media, Kian, *et al.* found the opposite result, women athletes were fairly treated by the Internet-based news outlets. The study examined the coverage of the 2006 men’s and women’s NCAA Division I tournaments provided by *ESPN Internet*, *CBS SportsLine*, and 10 other U.S. sport Internet sites. In contrast to the somewhat subjective 2008 Kian *et al.* study described above, this 2009 study

was based on more quantitative measures coding for characteristics of the article content such as mentions of physical appearance, athletic prowess, skill level, family relationships, strengths, and weaknesses. This study, focused on online media and using statistical analysis of coded variables found that "generally, [the] results of this research contradicted the use of gender-specific descriptors found in previous media studies" (Kian, *et al.*, 2009, p. 490). Apparently a focus on online media using numerical methodology found that progress in the equitable depiction of men's and women's basketball programs (in quality if not quantity) could be observed.

The question of the coverage of men's and women's basketball teams in 2016 was also examined by Chen, Duncan, Street, and Hesterberg in 2016. For this study, data was gathered for the 2013-2014 season for all of the SEC basketball teams. The online media studied were the official athletic department web pages, Twitter, and Facebook postings. The metrics employed were article and social media follower counts for each team from each of these three online sources. The findings were that there was no statistically significant difference in the official web page coverage devoted to men's *vs.* women's teams. Furthermore, for social media (Twitter and Facebook), "the total amount of Facebook posts proved to be in favor of the women's teams" and "the total tweets for women's teams was also slightly more than those for the men's teams" (Chen, *et al.*, 2016, p. 3). Chen *et al.* conclude that "these two findings suggest a strong implication regarding how social media can market and promote female college sports and reshape their underprivileged brand image" (Chen, *et al.*, 2016, p. 3).

So, in spite of the social and psychological dynamics cited above, significant progress towards the unbiased depiction of women athletes (in basketball and certain high profile Olympic sports) has been observed.

Summary

Studies of "traditional" media such as print and broadcast news sources have in general found little progress toward equitable coverage of women's and men's sports. One exception was coverage focused on one sport, Olympic beach volleyball. In contrast, several studies of online media from the period of 2003-2016 some progress towards equitable coverage is evident. However, these studies were primarily focused on only two sports, basketball and tennis.

The new study described here is designed to make several contributions. First, new data regarding the question of whether progress towards equitable coverage of women's sports is even possible will be provided by an assessment of the situation in 2018. This will be compared to the existing online media data for the period of 2003-2016. The most significant contribution of this study relative to the previously published studies is the number of sports which were examined. While most previous studies examined one or two sports, this study gathered data from the online coverage of twelve separate sports.

CHAPTER THREE

METHODOLOGY

Subjects

Using a random selection process, twelve schools were chosen from the Atlantic Coast Conference (ACC), Big Ten Conference (B1G), Pac-12 Conference (Pac-12), and Southeastern Conference (SEC). Each school chosen has these matched pairs of men's and women's sports: the "revenue" team sports men's basketball (MBB) and women's basketball (WBB), the "non-revenue" team sports men's soccer (MSOC) and women's soccer (WSOC), the individual athlete with team sports men's tennis (MTEN) and women's tennis (WTEN), and the individual athlete sports men's cross country (MXC) and women's cross country WXC). The following schools were used in the analysis: the University of North Carolina at Chapel Hill, Clemson University, North Carolina State University, the University of Virginia, and Wake Forest University from the ACC; the University of Kentucky from the SEC; Indiana University, Michigan State University, Pennsylvania State University, and the University of Wisconsin-Madison from the B1G; and the University of California, Los Angeles, and the University of Washington from the Pac-12.

Procedures / Protocol

This study utilized structured content analysis of current U.S. college athletic department web pages and Instagram accounts. There are numerous detailed guides for best practices in content analysis available. Concepts from Neuendorf's 2011 "Content Analysis - A

Methodological Primer for Gender Research", Collin's 2011 "Content Analysis of Gender Roles in Media: Where Are We Now and Where Should We Go?", and Neuendorf's 2017 The Content Analysis Guidebook were utilized to develop the codebook. The Collins' 2011 article is a brief review of the twenty articles that appeared in two special issues of the journal *Sex Roles* that year focused on the theme of media content analysis.

(1) Rubric Development

The first step was to develop a rubric containing examples of gender depiction in athletic department web pages and Instagram accounts along with the dimensions and scale of the proposed analysis. This rubric was used to train and guide the coders who were responsible for evaluating the web page and Instagram content. Establishing a fixed rubric for the content analysis facilitated a post-analysis review of the results of the analysis to gain some measure of the reproducibility and reliability of the initial analysis. The rubric developed for this study was based on six categories of online graphic and text content: *gender, media type, image type, focus, name,* and *content*. Each of these categories comprised two or more individual codes such as *male* or *female* for the *gender* category or *static image* or *video link* (*i.e.,* multimedia content) for the media type category. The full list of categories and associated scoring codes is show in Table 2. The dimensions for each category was the count of how many of the coded characteristics were displayed by each particular web page image, Instagram image, or web page text content. Two of the categories were somewhat more subjective (*image type* and *content*) therefore more guidance and training of the coders was necessary to achieve an adequate level of uniformity of the coding.

Table 2. Scoring Rubric: Categories and Codes

Category	Codes	
Gender	M	Male
	F	Female
Media Type	S	Static image
	L	Video link
Image Type	G	Game action
	P	Posed portrait
	Dg	Designed graphic
	Sp	Non-specific
Focus	T	Team
	I	Individual player
	C	Coach
Name	N	Named
	A	Anonymous
Content	Pf	Performance story
	Bi	Biographical

(2) Content selection and archival

Content was gathered from the official athletic department online content and sports detailed in the Subjects section (*vide supra*). Web pages and were collected during the first two weeks of their regular season, the middle two weeks, and the last two weeks of regular season of each sport to be studied. Photographs from the official athletic department Instagram feed will be collected for the entire regular search for each sport studied.

The URL and date collected for each web page and Instagram sample was recorded. Finally, the web page content was captured as either a PDF file, screen-captured graphic file, or

web archive document. This allowed offline and repeated content analysis of a fixed body of study information.

(3) Scoring

Each web page or Instagram graphic analysis was indexed by (a) the name of the coder performing the analysis, (b) the graphic source URL or feed time and date, (c) graphic source web page location (if the URL is not specific enough). Then, based on the dimensions and associated codes detailed in the rubric, the coder assigned scores to each graphic or photograph. These scores were recorded in a data gathering spreadsheet template which was be provided to the coders.

(4) Data Analysis

The data gathering spreadsheets contributed by each coder were aggregated into a single data analysis spreadsheet. The resulting data set was then reviewed for completeness and consistency. Any gaps (incomplete scoring) or other overt errors in scoring (*e.g.*, incorrect codes) were identified and discussed with individual coders to determine a resolution of such problems. Most web pages and images were scored by multiple coders. One score for each item was selected at random from those available. This was done to minimize any systematic or unconscious bias that any individual coder could possibly introduce into the data set.

With the complete and consistent data set in hand the fundamental data analysis was performed. This was extracting frequency values for each code for the online content of each school indexed by gender. This was obtained by an Microsoft Excel pivot table operation involving the gender code in combination individually with each of the other media type, image type, focus, name, and content codes. The relative frequency of each code was expressed as the percentage of women's sports associated content relative to the total content for both genders.

CHAPTER FOUR

RESULTS

The primary data obtained by this study is the count of web-based articles (coded as WEB) or Instagram posts (coded as INSTA) which focused on one of seven sports (three pairs of "gendered" sports programs plus one gender-neutral sport) originating from twelve U.S. universities. Each individual article and image collected for the study was further categorized by six characteristics: (1) medium (web page or Instagram image), (2) media (static image or multimedia), (3) image type, (4) focus (in terms of the individuals or groups featured in an image), (5) names (whether individuals are identified by name), and (6) content (whether the web content focuses on personality or sports performance). The specific coding for each of these dimensions is shown in the scoring rubric table (Table 2).

The results of this study are presented in terms of % F *vs. M* which is defined as:

% F *vs. M* = 100 * (Fm - Mm) / (Fm + Mm)

where **Fm** is the count of a particular scoring measure for women's sports and **Mm** is the count of the same scoring measure for men's sports at each school. So % F *vs. M* indicates the percentage relative coverage received by women's sports as measured by that particular measure of web or Instagram coverage. A negative % F *vs. M* indicates that women's sports receive less coverage, while a positive value indicates that women's sports receive more coverage, and a value close to zero indicates that women's and men's sports receive nearly equal coverage by that measure. The value of % F *vs. M* can vary between –100 (women's sports receiving no coverage by that measure) and +100 (male sports receiving no coverage by that measure). Using

the calculated % F *vs.* M values, summaries of the study results are presented in the following six series of charts, one series for each of the study dimensions *gender*, *media type*, *image type*, *focus*, *names*, and *content*.

Study Dimension *Gender*

The gender dimension (Charts 1A and 1B) compares the relative count (expressed as % F *vs.* M) of web page articles or Instagram images for women's sports *vs*. men's sports for each institution included in the study. As noted in the literature review, some previously published research suggests that newer Internet-based technologies might provide a forum for more parity in coverage for women's sports. However, as shown in Charts 1A and 1B this not the outcome observed in general for newer (Instagram) compared to older medium types (web pages). In fact, for most schools the Instagram %F *vs.* M measure indicates consistently *less* coverage for women's sports than appears in webpage postings. This overall result is reflected in the average %F *vs.* M values for web page coverage (–12%) compared to that for Instagram images (–34%). For three schools, NC State, the University of Kentucky, and the University of Virginia this disparity of coverage between web page content and Instagram posting is very large, with the Instagram %F *vs.* M for these schools markedly negative (*ca.* – 60). Only one school (the University of North Carolina at Chapel Hill) provided better coverage for women's *vs*. men's sports *via* Instagram. In addition, only two other schools (UCLA and Washington State) provided better coverage for women's *vs*. men's sports (%F *vs.* M > 0) *via* any medium type. (Michigan State, unlike the other eleven schools, does not have an official athletics program-wide Instagram account as indicated by N/A in Chart 1B.)

Chart 1A. Relative count of web pages featuring women's *vs.* men's sports

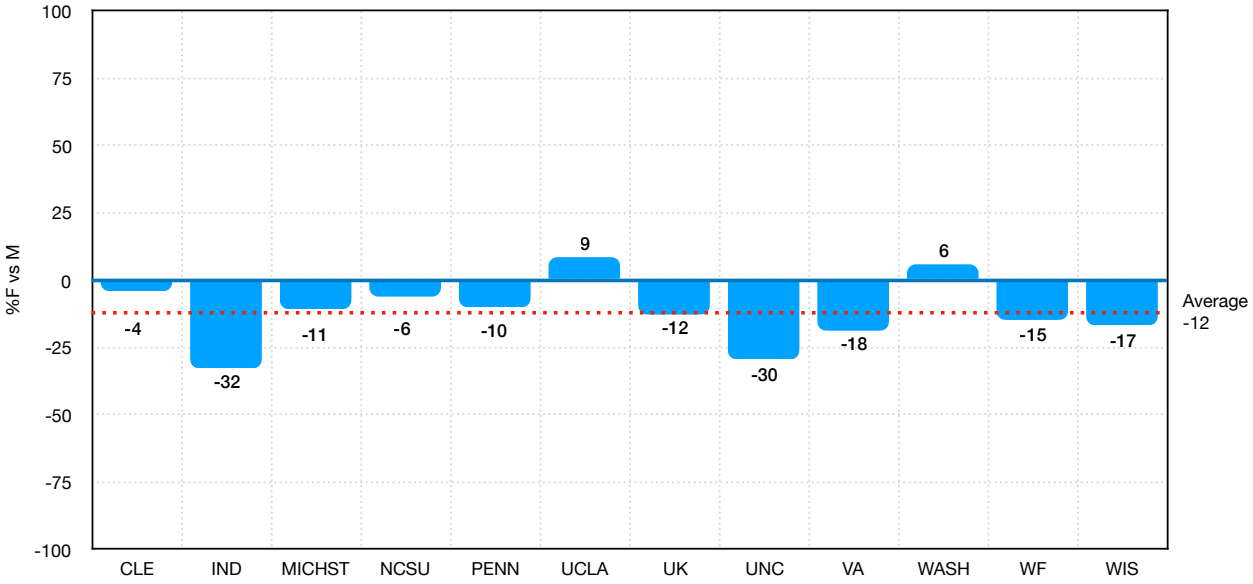
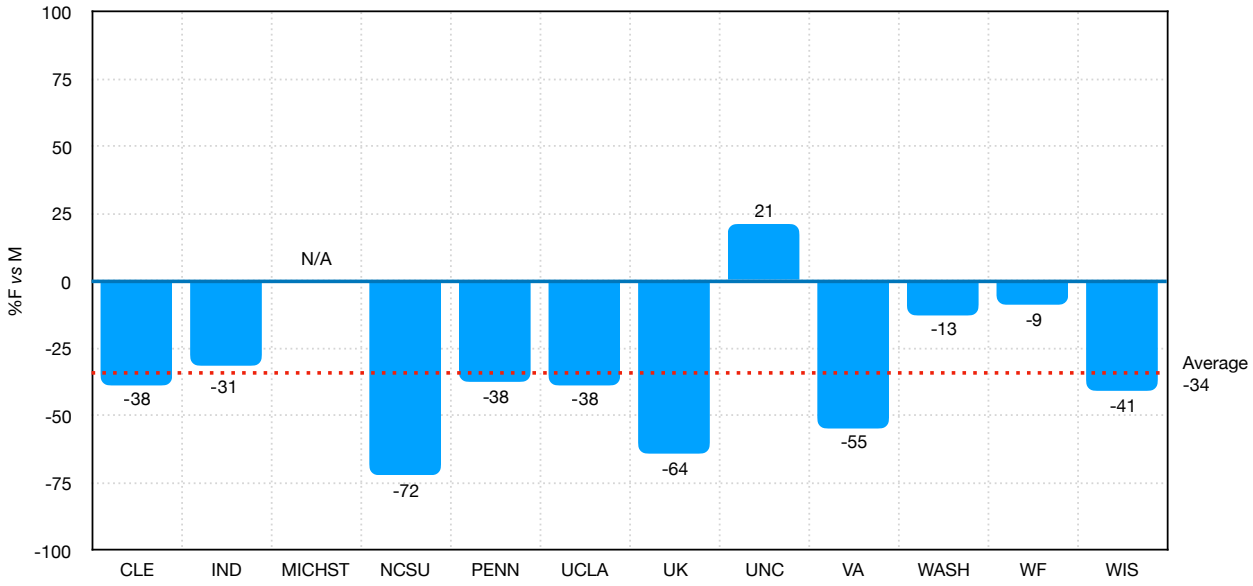


Chart 1B. Relative count of Instagram images featuring women's *vs.* men's sports



Study Dimension *Media Type*

Media type (Charts 2A and 2B) compares the %F *vs.* M values for measures of the sophistication of the media technology (static image or multimedia content) featuring women's *vs.* men's sports. As can be seen in Chart 2A which presents the relative amount of multimedia content of pages devoted to women's *vs.* men's sports, women's sports generally receive much less technologically sophisticated coverage (*i.e.,* multimedia) than men's sports. This is indicated by the large negative average %F *vs.* M value of –51%. Only three of twelve schools provide multimedia content for women's sports at close to parity (NCSU, UCLA, and Washington Univ.). In contrast two schools (Virginia and Wake Forest) provided *no* multimedia content for women's sports during the study period and four schools published much less than the already poor average %F vs. M value (Clemson, Michigan State, Penn State, and the University of Kentucky).

In contrast, content containing less technologically sophisticated static images is provided nearly equally for women's and men's sports. (Although even with this near parity, men's sports receive a slight advantage in graphic content as indicated by the overall negative average %F *vs.* M value of –10%.)

Chart 2A. Multimedia media type women's *vs.* men's sports

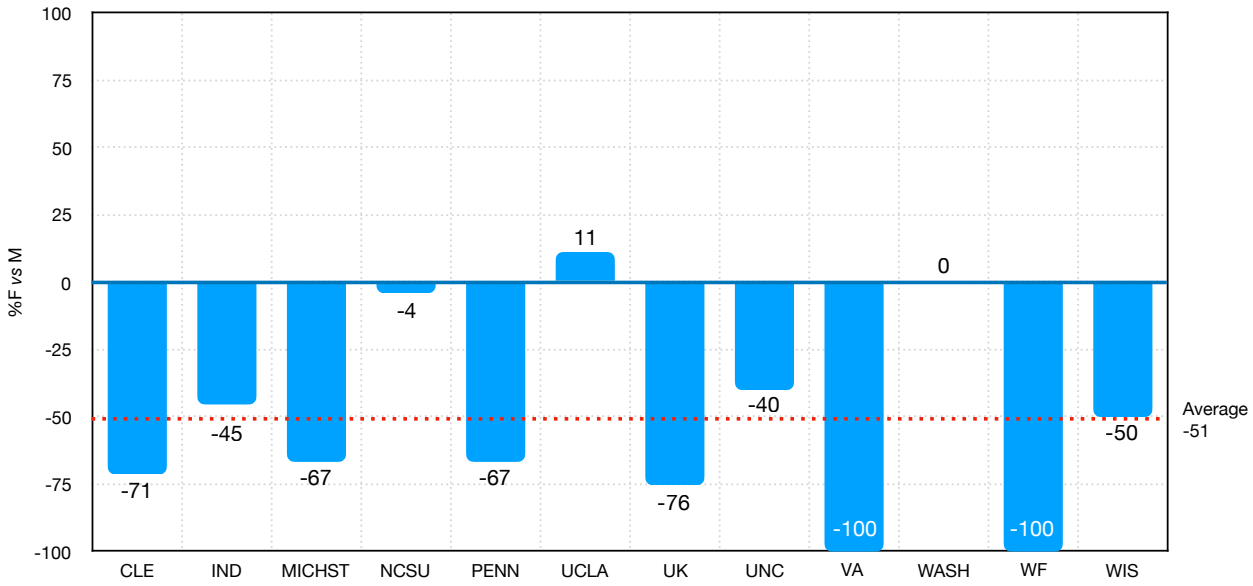
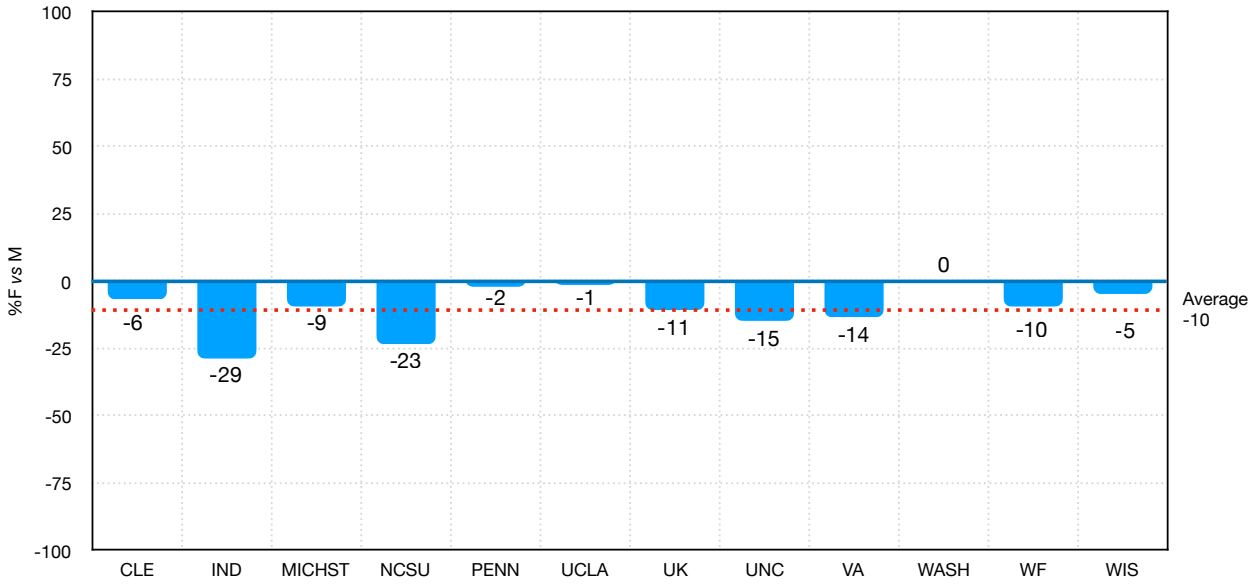


Chart 2B. Static image media type women's *vs.* men's sports



Study Dimension *Image Type*

Charts 3A and 3B show a comparison of the %F *vs.* M values for the *image type* measure of image content. The image type dimension provides a somewhat qualitative measure of the differences of coverage of women's and men's sports by a count of four image types: designed, game action, posed portrait, and non-specific graphics. While gender parity would be indicated by a %F *vs.* M value close to zero for designed graphic (Chart 3A), game action (Chart 3B), and portrait (Chart 3C), a large negative value for the non-specific code (Chart 3D) could be interpreted as an indicator of favorable coverage for women's sports. What was coded as non-specific images would be those which did not highlight individual athletes or teams but instead focused on non-personal subjects such as buildings and other campus features. So the large negative Sp %F *vs.* M values seen for nine of the twelve schools could indicate that this photographic web page or Instagram content focused more on the individual female athletes and teams with creative, personalized content (Chart 3D).

Other notable features of the image type results are the overall positive average %F *vs.* M value for designed graphic content (Chart 3A) with two schools (Virginia and Wisconsin) providing such high-value content *exclusively* for women's sports. In addition, the nearly zero %F vs. M value and relatively large positive values for posed portrait content found for five schools (Chart 3C) may be an indication of attention being given to producing personalized or higher quality graphic content for women's sports online coverage. The result for images featuring game action finds a slight bias against women's sports (average %F *vs*. M = –14%) with two schools showing no or nearly no bias (UCLA and Washington State).

The last metric in this class, non-specific image, indicates a remarkable trend strongly favoring personalized coverage of women's sports. As can be seen in Chart D, the %F vs. M

values for nine of the twelve schools are large and negative. In fact, the non-specific image %F *vs.* M for one school (Clemson) is –100, indicating that only men's sports are the subject of non-specific image content. In contrast, the +100 Sp %F *vs.* M value for Washington University indicates that *all* of the non-specific (*i.e.*, impersonal) online image content is focused on women's sports.

The results for Virginia and Wisconsin across all four image type metrics are remarkably similar. Both indicate what can be interpreted as a beneficial outcome in the coverage of women's sports. Higher-quality, designed graphics (Chart 3A) in these schools' online media are devoted entirely to women's sports (%F *vs.* M = 100) while the less-favorable non-specific image content (Chart 3D) is largely associated with the men's sports online content.

Chart 3A. Image Type – Designed Graphic

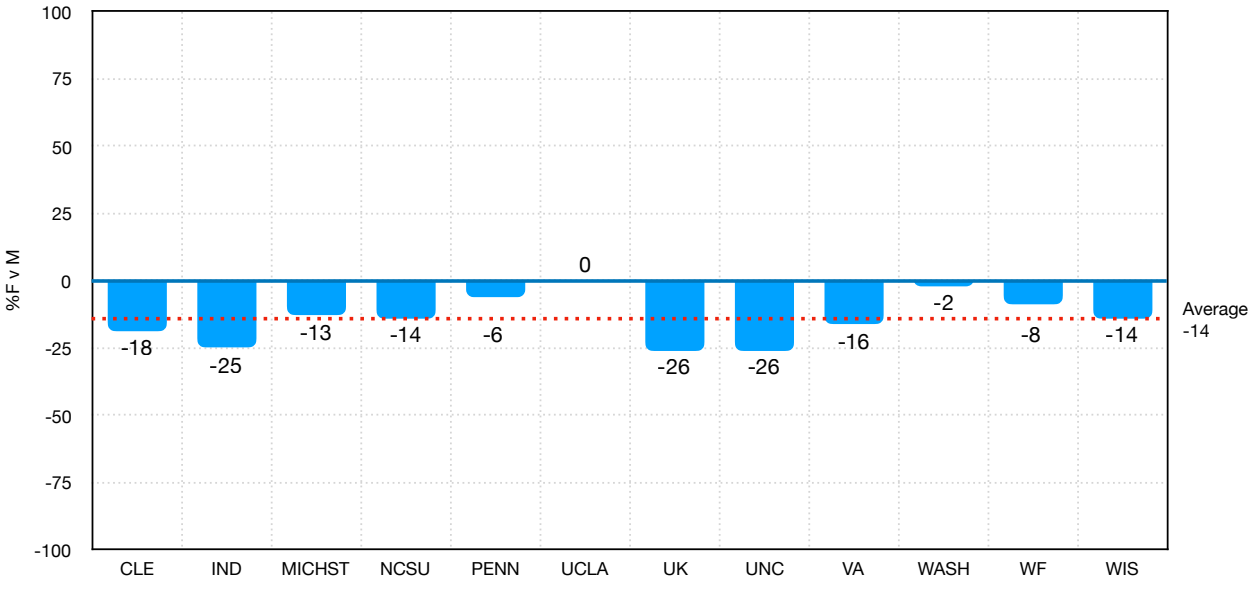


Chart 3B. Image Type – Game Action

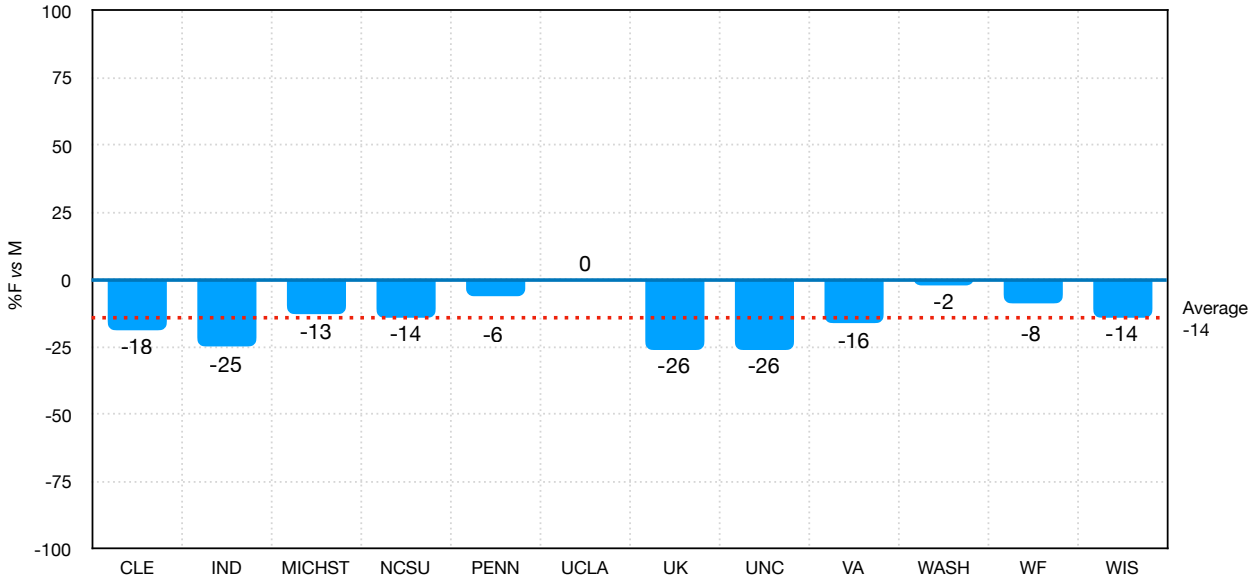


Chart 3C. Image Type – Posed Portrait

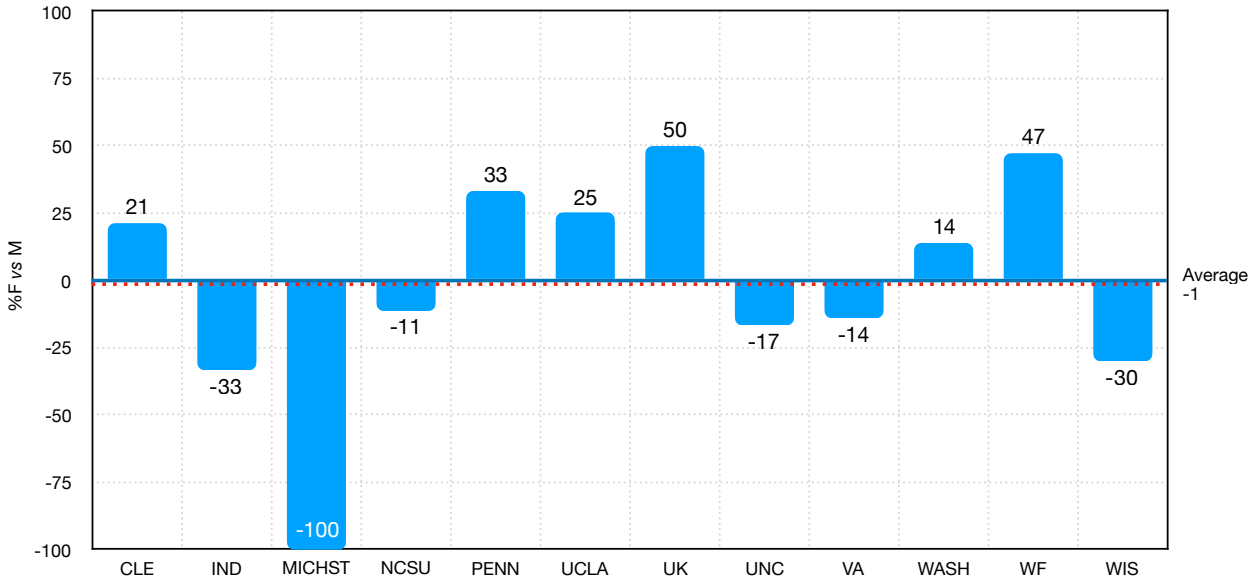
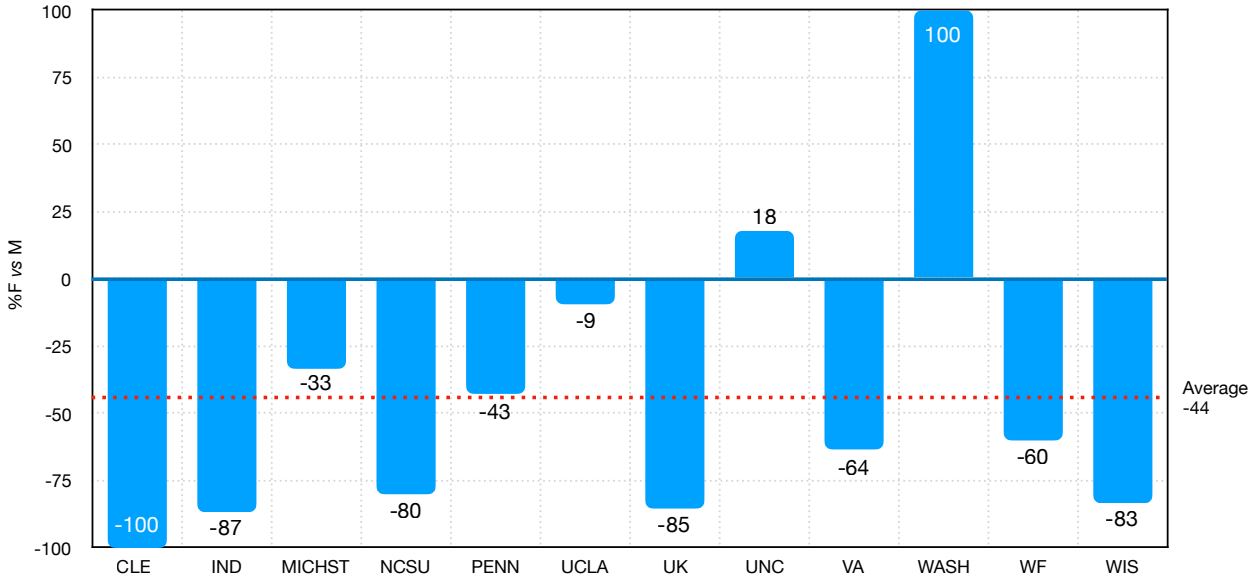


Chart 3D. Image Type – Non-specific Image



Study Dimension *Focus*

The *focus* %F *vs.* M values presented in Charts 4A, B, and C also show a wide range of outcomes. This dimension is a measure of whether online content is focused on individual players, teams, or coaches. While the values for individual and team focus (Charts 4B and 4C) are somewhat negative for nearly all of the schools (indicating that a player or team focus is somewhat more common for men's sports online content) the focus on coaches covers the entire range from –100 to +100 from school to school. At the negative end of the range, the online content from Clemson, Indiana, Penn State, the University of Kentucky, Virginia, and Wake Forest nearly exclusively focus on men's sports coaches. In contrast the online content from Michigan State, Washington, and Wisconsin focused exclusively on the coaches of women's sport teams.

Chart 4A. Focus - Coaches

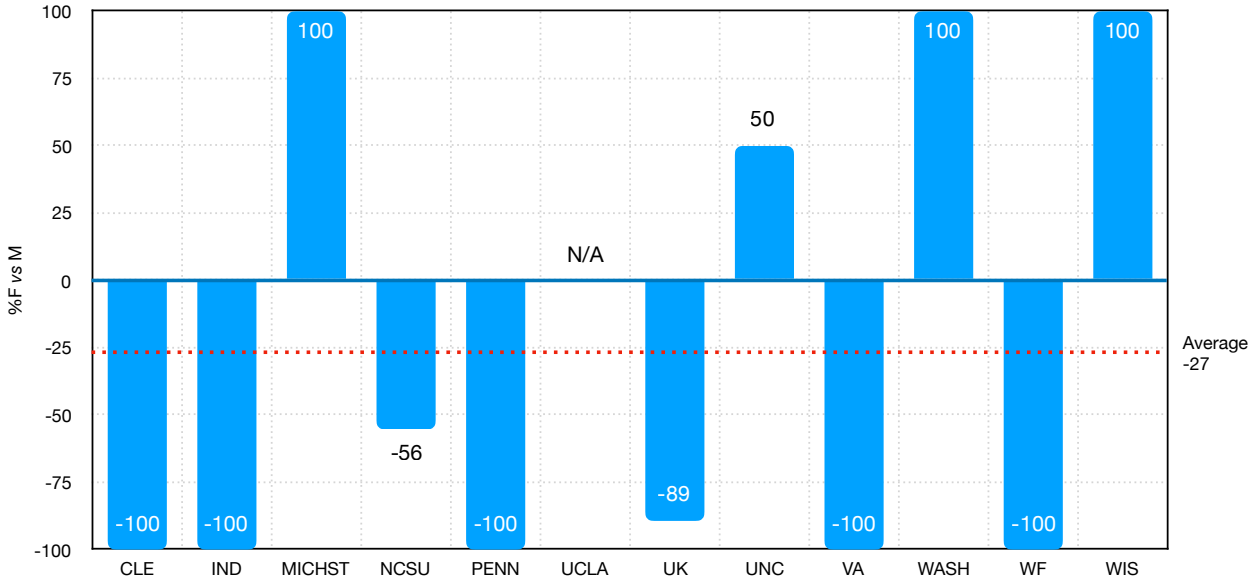


Chart 4B. Focus – Individual Athletes

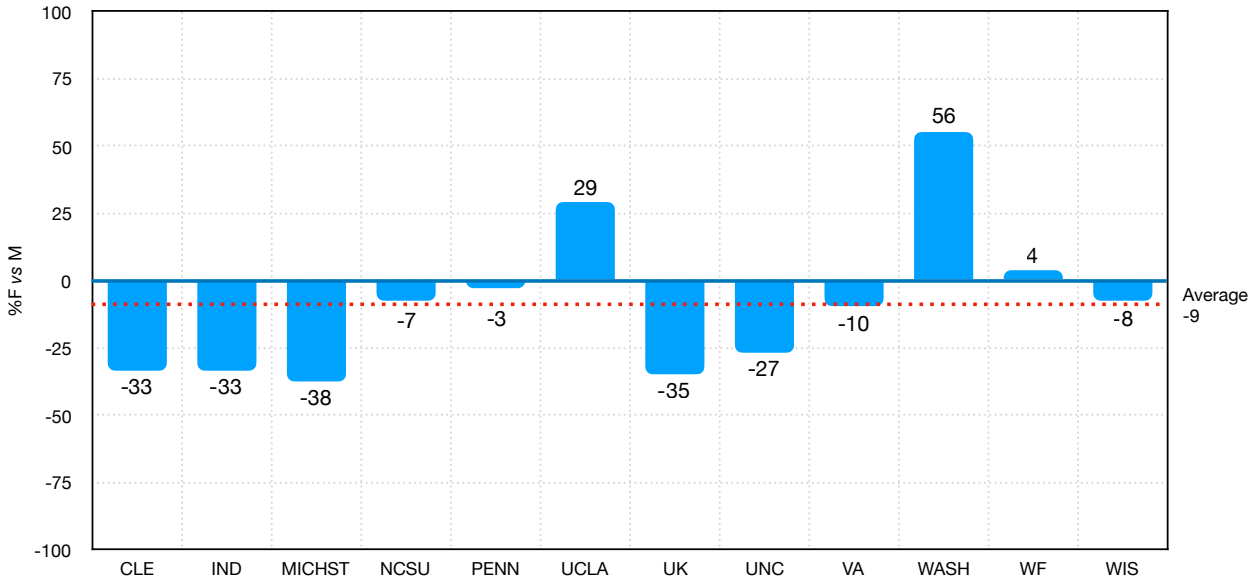
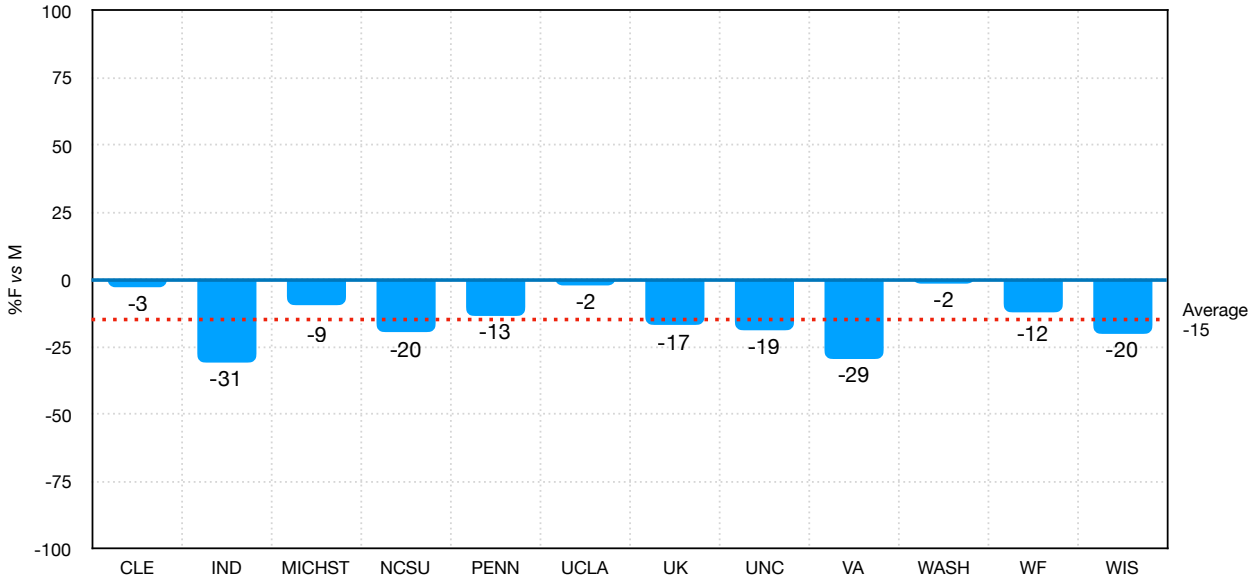


Chart 4C. Focus - Teams



Study Dimension *Names*

Chart 5A and B compare the dimension of *names*, *i.e.*, whether an individual appearing in web content is referred to by name. The coding is A for *anonymous* (individuals not named) and N (*named*). This is another data dimension that could be interpreted to have a qualitative character. Having more content named (N) and less anonymous (A) would be a favorable outcome for teams and athletes of any gender. What is found is that both measures are mostly negative indicating that men's sports receive slightly more anonymous and named content. However, the values across all twelve schools are small (*i.e.*, relatively close to parity) and quite similar. This indicates that the bias against equal coverage of women's sports by this measure is not large.

Chart 5A. Anonymous Content

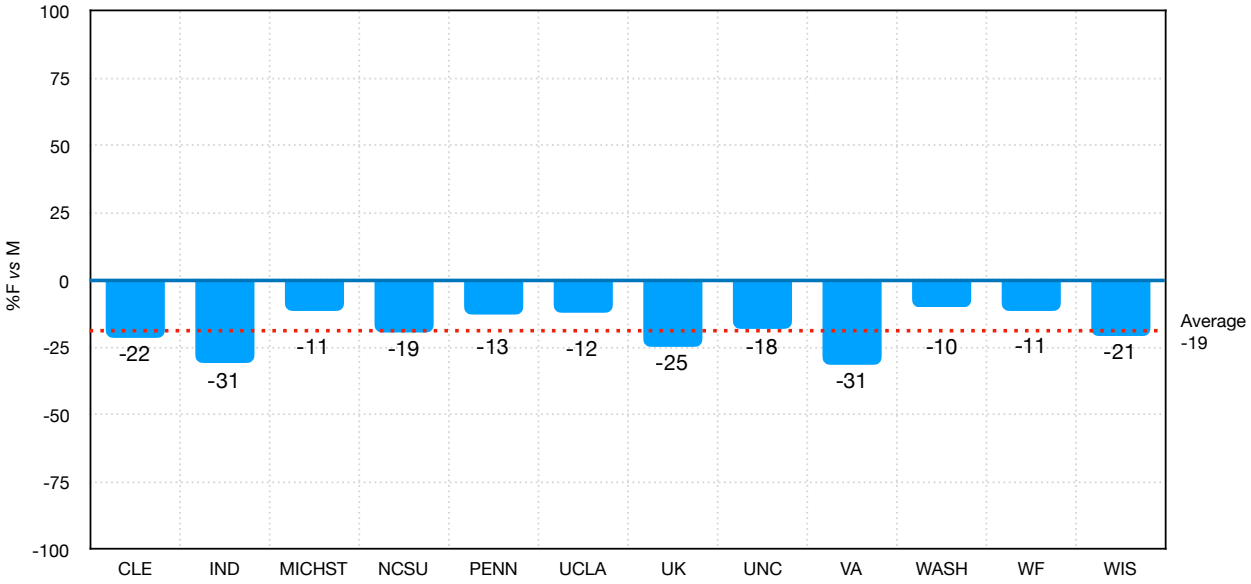
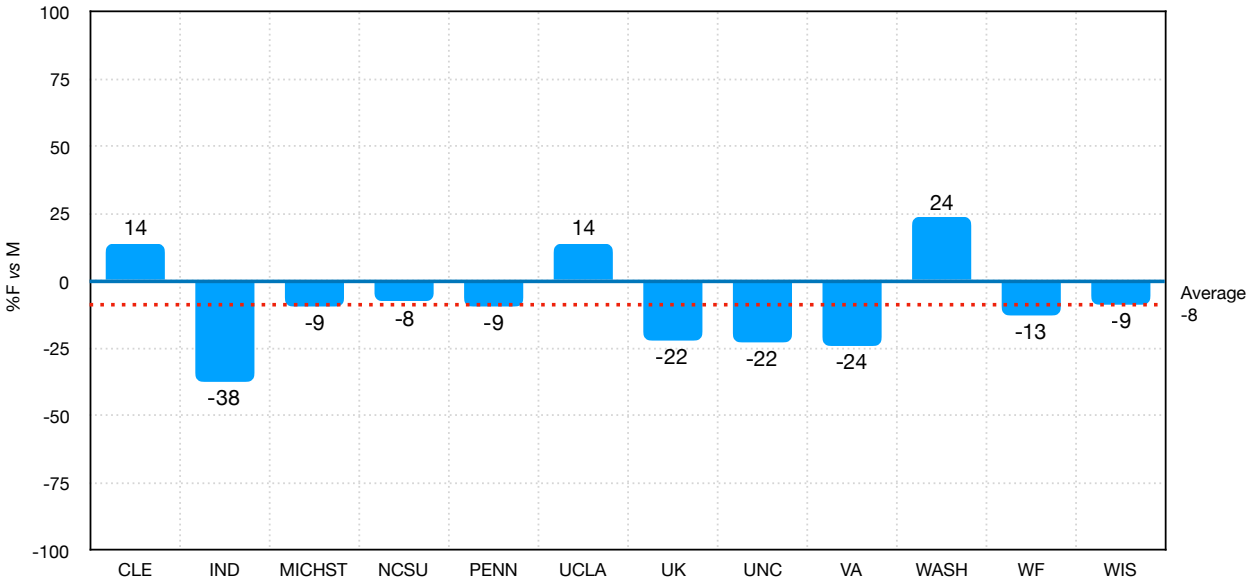


Chart 5B. Named Content



Study Dimension *Content*

The results for the *content* dimension presented in Charts 6A and B show an weak bias favoring women's sports with biographical content (Chart 6A) or a similarly weak bias favoring men's sports for sports performance content (Chart 6B). Previously published research had proposed that a bias against female athletes as athletes would be evidenced by a focus on personality (*e.g.*, family history and relationships) rather than sports performance or skill. However, the current study results do not find much disparity in this dimension. In fact, for two schools, Indiana and NCSU the opposite result was found: an emphasis on biographical content was associated with the online coverage of men's sports (negative %F *vs.* M in Chart 6A). This was offset somewhat by relatively large, positive %F *vs.* M values for biographical content from the three schools Virginia, Washington, and Wake Forest (Chart 6A).

Chart 6A. Content - Biographical

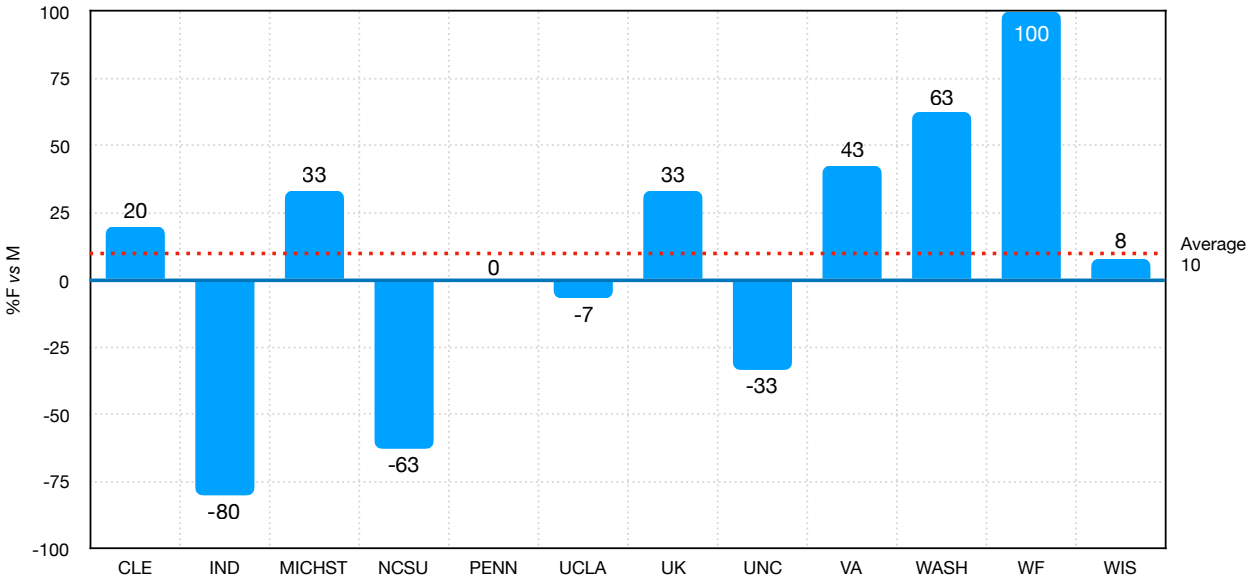
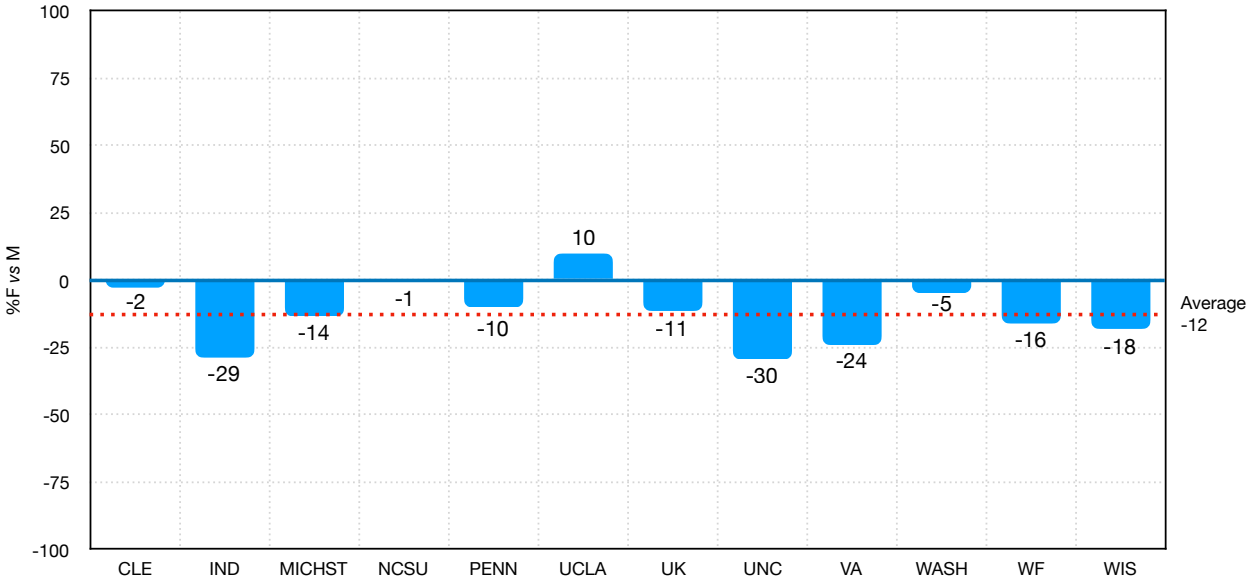


Chart 6B. Content – Sports Performance



CHAPTER FIVE

CONCLUSION

Response to Research Questions

RQ1: From a quantitative perspective, are men's sports posted about more frequently than women's sports on official athletic department Instagram accounts and websites?

This question is most directly answered by the results for the *gender* %F *vs.* M which summarize the relative numbers of web articles and Instagram postings for women's and men's sports (Charts 1A and 1B). The results from nine of the twelve schools for *gender* shows the count of web page and Instagram postings for men's sports exceeds that for women's teams. So the answer to Research Question 1 is, ***yes***, men's sports are generally posted about more frequently than women's sports on official athletic department Instagram accounts and websites.

Another view of the frequency of men's *vs*. women's sports online postings is shown in Chart 7 and Table 3 (*vide infra*). This data analysis shows the total web page and Instagram postings (as a percentage relative to the total number of, excluding cross-country which does not have separate women's and men's web sites) by sport rather than school. As can be seen from this analysis, the split between women's and men's sports postings is dominated by the large numbers of both web and Instagram postings for men's basketball. The sum of men's *vs*. women's sports postings both from web pages and Instagram separately and together is shown in Table 3. By this analysis the disparity between the coverage of women's and men's sports, though definitely observable, is not overwhelming large. In this research sample, men's sports receive about 16% more coverage than women's sports in online media.

Chart 7. Official Web Pages and Instagram Images for Women's & Men's Sports
(% Relative to the Total Number of Postings)

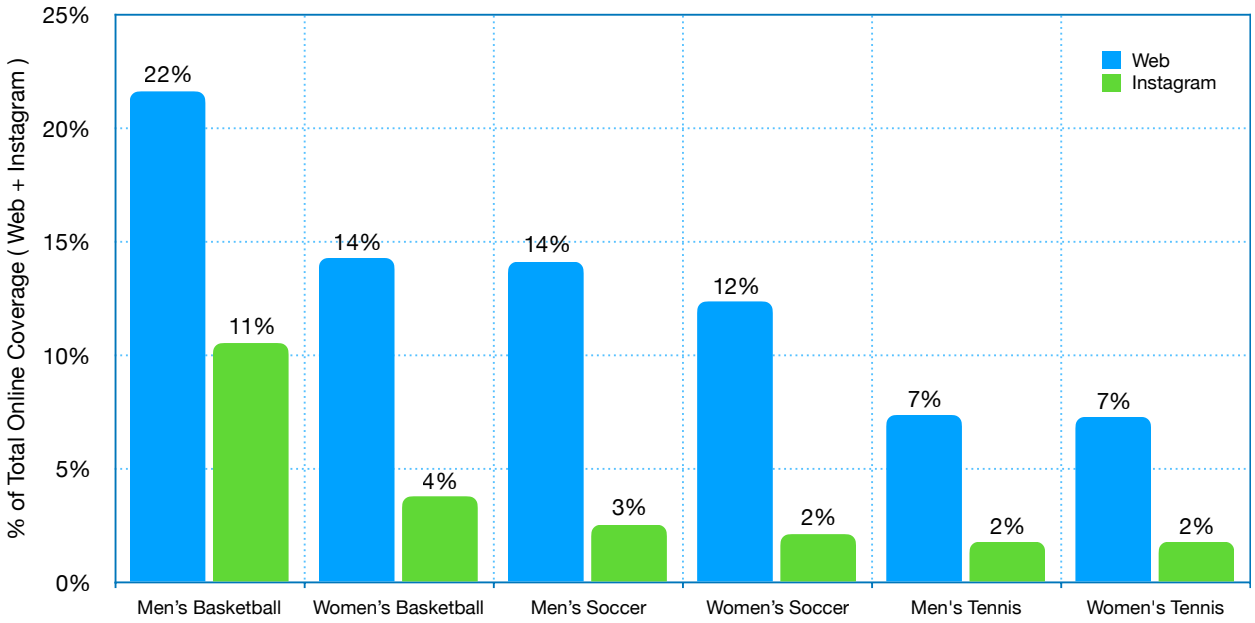


Table 3. Official Web Pages and Instagram Images: Total Postings

Media	Men's Sports	Women's Sports
Web	43%	34%
Instagram	15%	8%
Total	58%	42%

RQ2: From a qualitative perspective, does the language and content vary in men's sports posts *vs*. women's sports posts? For example, do the men's sports post have higher quality multimedia content than the women's sports?

One answer to this qualitative question can be found in the *media type* dimension results for multimedia content (Chart 2A). Although the results for two schools (UCLA and Washington) show qualitative parity, the results for the remaining ten schools show a fairly strong bias against higher quality multimedia content for women's sports. In particular, two schools (Virginia and Wake Forest) provided *no* multimedia content for women's sports online coverage. In addition, five other schools were found to have provided significantly more multimedia content for men's sports online coverage relative to that provided for women's sports.

While not as pronounced, the results from two other study dimensions, *image type* (Charts 3A and 3B) and *focus* (Charts 4B and 4C) do show a bias against providing high quality content for women's sports online coverage at many schools. But it should be noted that this apparent disparity in the quality of web page and Instagram content is not uniform across all of the twelve schools included in this study.

So the answer to Research Question 2 is, ***yes***, there is variation in the quality of content provided for women's sports *vs*. men's sports. And ***yes***, the web pages and Instagram accounts for men's sports do tend to have more higher quality multimedia content than provided for women's sports coverage.

RQ3: From a comparison of what is currently observable *vs.* the record of previously published studies are there any trends evident in the relative coverage women's vs. men's sports?

A review of studies on this topic over the past 15 years finds a record of qualitative, if not quantitative, progress towards equitable coverage of women's sports. However, such observations depended on the specific study methodology and the specific sports examined. For example, Cunningham (2003) found no difference in the coverage of men's *vs.* women's tennis as determined by the online descriptions of team coaches. Cooper (2008) found that women's sports received equal if not more online coverage as determined by four quantitative text and graphic metrics applied to six sports. Kian , *et al.* in two studies (2008 & 2009) found that although a strong quantitative bias against coverage women's sports exists, the quality of the online coverage of women's sports is much improved. As Kian, *et al.* concluded in their 2009 study "gender-specific descriptors" were much less prevalent in online content. In the context of qualitative *vs.* quantitative differences in coverage, a recent (2016) Chen, *et al.* study found that significantly more posts on Facebook and Twitter mentioned women's sports than men's sports.

In contrast to this apparent progress towards equitable coverage of women's sports in the online media, the results of a Clavio, *et al.* 2011 study "point toward a continuation of the traditional media methods of marginalization and objectification of females in the new sport media sphere."

Again, the results of the current study are that, in general, women's sports receive less favorable coverage in online media as measured by either quantitative or qualitative metrics. So, the answer to Research Question 3 is that, **no**, there has not been a consistent record of progress towards equitable coverage of women's sports and athletes to be found in the online media.

There are some bright spots such as the UCLA and Washington University focus on individual women athletes and use of multimedia and for some metrics such as posed photographs. But as can be seen in Chart 7, the coverage of the high status sports (men's basketball) skews the quantity of online coverage towards men's sports.

Discussion

In conclusion, this study of the online coverage of women's and men's sports at twelve U.S. universities found bias at many of these schools against equitable treatment of women's sports in both quantity and quality in the text and images. However, this inequitable coverage of women's sports did not seem to represent a systemic bias across all of college athletics. There was a great deal of variation in some measures of potential bias from school to school. Also, there was significant variation in the bias observed depending on which measure of the quality or quantity of postings devoted to women's sports was used for the comparisons. Thus, depending on which school and which measure of bias were examined, the bias against equitable coverage of women's sports could found to be large, small, or in a few cases, actually favorable to women's sports. Another interesting finding relates to the idea that "newer" media might exhibit less bias against women's sports relative to "older" media such as web pages. This turned out to not be the case. In fact, Instagram postings generally favored coverage for men's sports at eleven of the twelve schools studied. So the idea of "disintermediation" proposed in the Introduction did not seem to be an influence. Media such as Instagram which allow online coverage to be generated without as much (if any) editorial control is just as biased if not more than the older technology of web site-based coverage.

As summarized in the literature review section, past research and sociological thought had pointed to the existence of powerful cultural, psychological, and financial drivers for bias

against the equitable treatment of women's sports in any media. Some ideologies [*e.g.*, those of Erving Goffman (Goffman, 1977) or Candace West and Don Zimmerman (West & Zimmerman, 1998) maintain that the origins of such bias women in sports are so deep-seated and essential to the human condition that much progress against bias would be nearly impossible. Beyond ideology, direct studies of the coverage of women's sports in a variety of media has found bias against women's sports. However, more recently and for specific sports an improvement in the situation for women's sports was been reported by some studies (Kian, 2009; Chen, Duncan, Street, & Hesterberg, 2016).

The results of this study may provide a path to understanding how these differing observations can be reconciled. A more nuanced perspective may be necessary in order to understand how it is possible for different studies of media bias can produce such different results. Depending on the measure of bias or the particular context (*i.e.*, different sports or different setting) bias may or may not be found and the magnitude of bias may vary greatly. In addition, both the dimensions of *quantity* and *quality* of coverage must be considered. A particular school could superficially appear to be meeting Title IX goals with the *quantity* of coverage while the *quality* of coverage of women's sports could be suffering in comparison with that devoted to men's sports. In the context of Title IX compliance, the results of this study suggest that a broad spectrum of measures of bias (both qualitative and quantitative) must be considered to establish whether the treatment of women's sports in online media is equitable or not.

Word Clouds

After the group of coders were finished with the more objective, rubric-based analysis of web pages and Instagram postings they were asked to write brief descriptions of their overall impressions of the various athletic department online materials. The results of these subjective impressions are summarized as two word clouds, one summarizing comments on women's sports online media (Figure 1) and another for men's sports online media (Figure 2).

Figure 1. Women's Sports Online Media Impressions Word Cloud

Figure 2. Men's Sports Online Media Impressions Word Cloud

It is interesting to note the top words in the cloud for each gender: women's sports content was described using "Lacking," "Posed," "Team," "Informative," and "Detail" while men's sports content was described using "Team," "Descriptive," "Performance," "Informative," and "Abundant." Overall the impressions of women's sports used concepts such as "Fun," "Bright," "Minimal," and "Relaxed" in contrast to men's sports marked by concepts of "Bold," "Intense," "Complete," "High-energy," and "Popular." It would appear that the *subjective* message imparted by online coverage of women's and men's sports parallels that of the more objective, code-based analysis: men's sports generally receive higher quality coverage.

Directions for Future Research

Directions for future research into the equity of online coverage of women's and men's collegiate athletics could be to extend the study to more schools and over a longer period of time. By studies on additional schools the generality of the findings could be further validated by including institutions with a broader range of characteristics such as enrollment sizes and athletic traditions. With a wider range of schools, more pairs of women's/men's sports may become available for study. Also, a wider range of schools would make it possible to study the influence of student body characteristics such gender and sport participation ratios. Another extension of the study would be to acquire data over a longer period of time whether by retrospective studies on past online content or adding additional data "snapshots" in the future. This would permit a more rigorous answer to the question of whether there are any trends in the equity of the online coverage of women's sports.

A second direction for future research would be to consider whether the conditions at the individual schools that produce the online coverage outcomes can be more directly studied. The question here is who are the actual content creators and who is directing their efforts? Are the content creators students, interns, or full-time professionals? How independant are the groups that create the online content? Are they directly managed, controlled, or advised by the coaches, athletic departments or the university administration? The assumption is often expressed that new media, particularly at U.S. universities, is in the hands of a younger, more "tech-savvy" generation than the "traditional" print and broadcast media, but is that true? The fundamental question to be explored is are trends in the coverage of women's sports made possible by the actions and attitudes of *individuals* or *organizations*?

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